

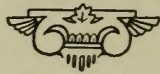
657

R43

cop.1

L I B R A R Y

B O S T O N
U N I V E R S I T Y



 **COLLEGE** 
BUSINESS
ADMINISTRATION

Class No.	* 657
Book No.	R 43 <i>cop. 1</i>
Acc. No.	22675
Date	7-12-34

BUDGETARY CONTROL IN THE SHOE INDUSTRY

A Thesis Presented for the
Degree of Master of Business Administration

By

Stephen J. Ridge
Bachelor of Arts
Holy Cross College
June 17, 1931

Boston University
1934

7-12-34
22675
* 657
R43
cop.1

CONTENTS

	<u>Page</u>
Introduction	4
Chapter 1	
Modernization in the Shoe Industry	7
Basis of Modernization	7
External Modernization in the Shoe	9
Internal Modernization in the Shoe Industry	15
Chapter 2	
Budgetary Control	16
Use of Budgets for Governmental Policies	17
Budgetary Control in the Shoe Industry	19
Organization for Budgetary Control	23
Length of the Period	30
Sales Budget	35
Production Budget	42
Expense Budget	63
Chapter 3	
Accounting as an Administrative Aid	69
Cost Accounting in the Shoe Industry	73
Necessity of a Cost System	75
Financial Accounting	86
Financial Statements	94
Conclusion	97
Bibliography	100

LIST OF ILLUSTRATIONS

<u>CHART</u>		<u>PAGE</u>
1.	Divisions of the Organization in Budgetary Control	31
2.	Stores Ledger Card	47
3.	Purchasing Forecast	50
4.	Relation of the Estimated Activities of the Sales and Production Departments	52
5.	Operation Sheet for Tabulating the System of Manufacture	58
6.	Material Requisition	77
7.	The Cost Sheet	83

INTRODUCTION

It is sometimes said that "Big Business" entered on the industrial stage with the advent of the machine age. "Big Business" has existed for thousands of years. The men who built the pyramids, the contractors who operated the wheat markets of ancient Rome, the merchants who traded with the eastern countries, were all doing business on a large scale. The introduction of machinery removed many of the laborious and expensive angles of production and marketing, but in turn it created and aroused difficulties unheard of in the period preceding the industrial revolution.

Everyone knows that there is more to industry than huge factories whose silhouetted smoke stacks belch blood-red flames at the sky; more to industry than huge dynamos surcharging thousands of polished whirring machines; more to industry than the millions of men and women treading a monotonous path to repetitious tasks. Most people realize that this added and necessary feature is CONTROL.

It is important to consider how the mental management of this fast-growing commercial monster, from an internal standpoint was accomplished. This paper discusses one

particular phase of business -- the management of it through budgetary control.

There are, of course, different kinds of control and management already installed in business and industry. There are methods of internal check which reduce the possibility of inaccuracy in the bookkeeping records. There are well-defined methods for determining the cost of doing business. There are the calculations and plans of efficiency experts for correcting existing errors of management and production. These are only a few of the many systems of control designed to establish and promote a profit-making organization. In this thesis, however, we shall consider budgetary control which is used extensively in connection with policies concerning the government, states, and cities of our country. We shall attempt to show its place in business. In order to make our discussion more understandable and definable, we shall treat specifically - Budgetary Control in the Shoe Industry.

The title of this paper requires a brief explanation. "Shoe Industry", of course, needs no definition. By it we refer to the tremendous industry exemplified by the modern

factory housing thousands of efficient machines and millions of men. The definite goal is the production of shoes, millions of pairs, for the comfort of the civilized peoples of the world. "Budgetary Control", however, needs to be clarified. By this term we mean a sagacious business plan determined in advance of operations, composed of singular outlines and ideas necessary in running and improving the business judiciously. The establishment of such a plan presents a well-formulated outline to be operated in coordination with the employees and machines, and results in a well-shaped program for the business as a whole. Its purpose is not to limit and restrain the personal abilities and knowledge of managing executives, but to establish an imaginary trail to guide the destiny of the industry and to develop more business.

factory housing thousands of efficient workers and thousands
of men. The definite goal is the production of more
millions of pairs, for the comfort of the civilized peoples
of the world. "Budgetary Control", however, needs to be
clarified. By this term we mean a business business plan
described in terms of operations, composed of financial
outline and then necessary in planning and improving the
business financially. The establishment of such a plan
provides a well-formulated outline to be operated in
coordination with the employee and machine, and results
in a well-shaped program for the business as a whole. Its
purpose is not to limit and restrict the personal initiative
and knowledge of working executives, but to encourage an
industry that will guide the destiny of the industry and to
develop more business.

CHAPTER ONE

MODERNIZATION IN THE SHOE INDUSTRY

"Under the stimulus of capitalism there has evolved an industrial system that has multiplied the productive power of the individual and of society. The serfdom of man to the forces of nature, the enslavement of mankind by the necessity of producing a mere pittance of material benefit with an exorbitant expenditure of effort is ended. Men have been emancipated from the status of beasts of burden. Machines have taken over the back-breaking tasks imposed upon men from the time of the Pyramids to the French Revolution."¹ At times, the harshest of methods have been enlisted because the inhabitants of the world deemed it necessary to advance. Wars have been fought, men have died, customs and kingdoms have been discarded, often perhaps to no avail, but because progress demanded such action.

As a result of this progress, the inhabitants of all countries have been brought closer together and enjoy

¹"New York Times", P. M. Mazur, November 29, 1931

CHAPTER ONE

THE PROBLEM OF THE FUTURE

"Under the stimulus of scientific progress we
witness an industrial revolution that has multiplied the
productive power of the individual man of society. The
control of man to the forces of nature, the enlargement
of man's life by the application of knowledge, the extension
of material wealth, and the consequent expansion of
effort is evident. Man has been emancipated from the
fetters of poverty and hunger. Diseases have been kept
back, and the human race is progressing upon the line of the
future. As the human race progresses, it finds the nearest
of nature have been multiplied because the knowledge of
the world is necessary to progress. Man has been
freed, man has died, man has and man has been
discovered, often perhaps to no small, but because progress
demanded that action.

It is a result of this progress, the knowledge of
all sciences have been brought closer together and enjoy

a more abundant life. Many of these developments have been outgrowths of primitive methods. The high-speed locomotive has supplanted the covered wagon; the oil-burning steamer has surpassed the clipper ship; radio and telegraphy have shown the inefficiency of signal fires and mail wagons. "For millions of people standards of living have been raised above bare subsistence levels. Education has become reasonably general. Conditions of work and living have been notably advanced, resulting in a marked improvement of the health of mankind. Science has created new services and products. The laboratory has made available as everyday possessions the fondest dreams of eighteenth-century scientists."¹

All the nations of the world, as well as all the industries of these nations, have imbibed from all sources what was applicable to their needs and further advancement. They have rejected, both by deduction and experiment, all those points which may be suitable elsewhere, but which seem to deter their step in modernization.

Industry was forced to retrench in order to follow this reconstruction. The development necessitated

¹"New York Times" P. M. Mazur, November 29, 1931

many drastic changes in the routine of industry, so that it might adjust itself to the ever-increasing scope of activity taking place in the world. Since our treatise is pertaining to the shoe industry, we shall avoid generalities and briefly discuss only the external changes which greatly affect the shoe plants of today.

The shoe industry as we understand it at the present time, is the result of practices and methods perfected by years of labor and the tests of time. There are two main factors now adopted permanently in our plants. The first factor is the adoption of machinery of different types, not primarily designed for the manufacture of shoes, but which has proved advantageous to it and is now an integral part of the industry. The second factor is that type of specialization that relates to the distinct subdivision and classification of work among the employees.

It is important at this time to point out how these two factors developed through the years and are now important elements in the size and complexity of the modern shoe industry.

Shoes were in vogue as early as 1600 B.C. From that time on, footwear was considered an essential addition

to fashionable attire, as well as a necessary protection for the human foot. Until about the middle of the nineteenth century, footwear was made entirely by hand with the aid of simple tools, such as the lapstone, hammer, and pincers. These hand-made shoes required many¹ hours of tedious labor in their construction.

During recent years the ancient way has been displaced by a system of machines, which turn out perfect shoes, hundreds of pairs, in the time it took the old-style workman to make a single pair. These mechanical devices have been responsible for the development of three major processes, each using special types of machinery. They are, "The Goodyear Welt Process", "The McKay Process", and "The Goodyear Turn Process".

The "Goodyear Welt" shoe derives its name and special character of construction from the use of a welt, which is the narrow strip of leather serving as the connecting element between the shoe upper and the outer sole. This type of shoe is perhaps the most popular in use today.

In order to meet certain demands of the trade, there has been developed a McKay shoe on which a specially-prepared type of welt is attached to the outer sole. This

is then stitched and gives the appearance of a shoe made on the "Goodyear Welt" principle.

The "Goodyear Turn" shoe machine replaces the old method of sewing two pieces of leather wrong side out and then turning the seamed side in. The turned shoe is made with an ordinary upper and single sole which are sewn together on the "Goodyear Turn" shoe machine. The turning of the shoe is now successfully being done by machine, but considerable effort is still being put forth to make a machine that will sew this type of shoe right side out and thereby eliminate the now necessary process of turning.

The growth of the shoe industry during the past fifty years has surpassed all former periods. In the manufacture of a shoe today there are sometimes one hundred and seventy operations performed, which necessitates in some factories the use of over fifty different types of machines. The remarkable work of the past generation could never have been accomplished had it not been for the constant development and standardizing of machines and processes, and the close co-operation between the manufacturers of shoe machinery and shoe manufacturers themselves.

Today, shoe manufacturers large and small can secure any or all types of shoe machinery by leasing it. Nearly all shoe factories are conducted on this basis. The United Shoe Machinery Company is responsible for this fact. They design, construct, and then lease their machines not only to the small cobbler operating a repair shop, but also to the largest manufacturers of shoes. Sixty-eight per cent of the shoe machinery made by this company is made by no one else, and its interlocking leases extend its control beyond this figure. Ninety-eight per cent of the shoes manufactured in the United States, to say nothing of the shoes manufactured in England, Italy, and elsewhere, pay the United Shoe Machinery Company a royalty for the use of these machines. It amounts to from one to five or six cents on each pair of shoes constructed. The United Shoe Machinery Company has been chiefly responsible for developing the shoe industry to its present position. It has often been referred to as "the shoe industry itself".

A factory plan to modernize production was necessary to work in conjunction with the perfected machines, in order to achieve the greatest results. Many plans and systems were adopted and discarded, pending the arrival of a

nearly-perfect one. The system of specialization was chosen because it had the necessary requisites.

The specialized worker, a necessary figure in our shoe factory at the present time, may be traced back to the skilled craftsmen of the seventeenth century. These ancient artisans were known as "Kitchen Workers". They devoted evenings to the production of shoes for their families, and each worker had a specified task to complete on the shoe. They were skilled in their respective tasks. Less time than personal construction demanded was expended on the shoes and each phase was of a standard type work, due to their familiarity with minor details.¹ The many phases in the present-day production of shoes, even with the assistance of machinery, requires a definite knowledge and understanding of the work to be done. The achievement of perfection can be accomplished only by constant application to the same duty by the same workers.

The Training Department in the modern organization is an important factor in bringing about this perfection. This department, through its employment manager, enlists in its personnel only workers who will be applicable to

their needs and suitable to the well-being of the plant. This department in its simplest form involves nothing more than preliminary training in the plant under a regular foreman, an experienced worker, or an instructor selected for the task. The vestibule, or training school, is a variation of this method and is sometimes used by companies which have to train large numbers of men in intricate or skilled jobs. It is a training department separate from production shops, where special instructors teach new or transferred employees processes or jobs they are to fill. These employees are subjected to an extensive training period and have a thorough understanding of their duties before being placed upon actual production.

In the manner outlined above a standardization of personnel, conditions, and operations is brought about, which enables the workers to perform their assignments systematically and scientifically with great efficiency. Training of workmen has proven well worth-while and often more than pays for itself by reducing waste and damage. This is particularly true in establishments using expensive raw materials and valuable machinery.

The external changes which have taken place in the shoe industry stand as a monument to the pioneer craftsmen of yesterday. The machines are the mechanical artisans, the successors to the ancient "Kitchen Workers" whose skill has been supplanted by invention and electricity. The specialists are the thinkers, not the laborers, the men the pioneers sought to create. This is progress.

The internal features of the shoe industry, that is, the underlying principles governing these mechanical modernizations or external features, must of necessity advance to round out completely the extraordinary turn of events. Modern methods of management must govern modern methods of production, in order to definitely establish control over these productive agents and receive the best results from their use.

The feature to stabilize this mechanical progress is Budgetary Control. It is modernization as regards the management standpoint; it is the necessary modifier of operations. A more intimate discussion of this principle in the following chapters will show us that this too, is progress.

CHAPTER II

BUDGETARY CONTROL

Every year the people of the United States have presented to them, both by newspapers and radio discussion, the details exercised by the government officials in adjusting the finances of the nation. Long hours are spent by the committee in charge examining every possible detail of income and expense, and in striving to find unseen items, which might affect the financial status for the coming year. In other words, to express ourselves in the common vernacular, they must "balance the budget".

In order to effect this balance, there must be collected in advance of the activities of the year, some definite knowledge to guide better these executives in the problem of conducting the nation's business. This definite knowledge is arrived at by the use of budgets. It may be deduced then, that the constant use of budgets, which are based on predetermined facts and past experience, have the ability to effect this guidance.

Budgetary control is definitely a post-war development. Before that time it was almost entirely confined to governmental policies. The time has come, however, when its efficacy and adaptability to other lines, especially to industrial activities, has been seen. Accountants have cited facts wherein it will help the general welfare of a business. Industrial engineers and students of management have been earnestly trying to interest manufacturers in this plan to stabilize their business.

It is easy to understand the slow progress made in the adoption of budgetary control in business. Industry, previous to the World War, lacked definite knowledge regarding its activities, and had perfected no means of knowing its expenses, nor of controlling its expenditures under any definite plan of organization. Manufacturers proceeded to make any product with which they were familiar and had the facilities for, without particular regard for market demands or the necessity of meeting competitive prices. Little consideration was given to the products sold or to the

methods of selling them. Selling prices were predicted on total costs and there was seldom any difficulty in obtaining that price. Fortunately, before manufacturers found they could not continue from day to day to grind out products in a manner which ignored all these essentials, the groundwork of budgetary control had appeared on the industrial horizon.

It was realized that the budget practice of the government could not be directly copied by industry. In government the legislature first determined the budgeted amount and then fixed the rate of taxation to meet this amount. In industry the cost price was limited by the market price. It was necessary, therefore, for the manufacturer to decide whether or not the market price was sufficient to cover the cost before he made the goods or accepted an order. In government affairs, the aim, at least in theory, was to keep the budgeted amount as small as possible. In industry, the aim was to make the sales budget as large as was consistent with possible sales, plant capacity, and financial resources, and to make the production budget in proportion.

As these facts became apparent to the industrial mind, the budget idea was seized upon as a panacea for all business ills. Experience, however, demonstrated that the budget is a great co-ordinator, an aid to clear thinking and intelligent action, but not a cure-all. A complete budget co-ordinates the plans of the buying, production, and selling departments of a business. Such co-ordination focuses upon the plans as embodied in the budget, the thought and judgment of the persons responsible for the success of the business, and brings to their attention automatically, much that might otherwise be overlooked.

As a result of the efforts which have been put forth to establish budgetary control in industry, we find this plan is now used in a large number of the shoe plants in this country. Many manufacturers were eager to try it because it seemed to offer a means of reducing the many complications which arise in a poorly-controlled workshop.

Budgetary control, then, as seen in the shoe industry, is to be specific, a system made up of a number of budgets, the proper use of which results in

the control of subsequent functions and activities of
the plant.¹ These budgets are established for a
definitely-stated period. They are based on mathematical calculations or estimates which are clear-cut and have a definite meaning for those interested in their use. Each budget figure represents an estimate it is true, but they are derived from previous actual figures. These figures, after being tempered by individual judgment, present theoretical standards. These standards are a goal, and though the final result may seem difficult to achieve, nevertheless, it is not impossible. Standards that have been used in past years cannot be accepted for the present period, except where business and plant conditions have remained unchanged. It will be seen that many standards are to be determined for the subsequent period to conduct the activities of the plant profitably and most efficiently.

There are of course, necessary fundamental steps which must be arranged before any estimates can be prepared. The development of budgetary control depends on these estimates, and it is necessary that there be some foundation upon which these estimates rest in order to

strengthen their control. If efficient administration is to be accomplished, it is necessary to provide not only for the making of plans to secure co-ordination of departmental activities, but also for administrative control of these activities, so that the plans made will be carried out.

In a small business the president may supervise and direct all of the administrative functions. In a business of any considerable size this is impossible and it is necessary to employ other officers to assist in the formulation of the executive policies of the business. The number of such officers who may be employed and the duties which they may perform will depend to a considerable extent on the nature of the operations of the organization and consequently on the administrative functions which must be subject to executive supervision.

An organization is like a great machine in which every part is dependent upon every other part. The efficiency of the whole is dependent upon balanced relationships and co-operative activity throughout. The following steps give a general plan for the development

of an effective organization:

I. Preliminary Steps

A. Determine kind of organization

1. Line

a. Military

1. Single executive supervises entire organization
2. Each executive is responsible to his immediate superior

2. Line and Staff most prevalent today

- a. Staff analyzes and advises line officers
- b. Line officer takes direct action

3. Functional- Eliminates one-man control. Each executive an expert in his particular field. Directs all activities in scope of his division.

B. Fix responsibilities of each executive and of each employee

1. Have no overlapping of responsibilities

C. Formulate organization chart

D. Develop rules for guidance of organization - Standard practice

1. Put them in writing in form of working manual

E. Assemble workers into groups or departments

F. Place department head over each group and make him responsible for:

1. Laying out work for his department
2. Flow of work through his department
3. Completion of work
4. Discipline of his department

II. General rules to be followed:

- A. Authority to give orders followed by responsibility
- B. Make authority commensurate with responsibility
- C. Make executive responsible for actions of all subordinates
- D. Do not give orders to subordinate over head of executive in charge
- E. Have standard practice and see that it is followed

III. Personnel and Practices

- A. Pick key man or general manager
- B. Delegate entire authority to him
- C. Make him responsible for running of business
- D. Lay down practices to guide him
- E. He will pick his assistants and heads of each department
- F. Train employees
 - 1. Keep adequate supply of younger men in training for key positions
 - 2. Avoid duplication of authority¹

We shall adapt certain phases of this outline to our own use.

Many of the difficulties in carrying out a budgetary-control program arise through failure to secure proper co-ordination of activity in the organization. There must be a positive responsibility for performance of every act involved in carrying out the operating program. Any company which fails to recognize the importance of this is doomed to failure not only in its budgetary program, but

¹ Adapted from Lectures by Prof. R. G. Wells B. U. 1932

probably in its business venture as well.

In order that the budgetary program be properly formulated and executed, it is necessary that they be instructed with reference to the budgetary plans of the business. Although previous to its installation it is impossible to secure a complete realization by all the executives and employees of what the budgetary program involves, as much as possible should be done to this end before the budget program commences.

Much more might be said with reference to the importance of securing the co-operation of executives and employees, but it is thought that the necessity for this co-operation is evident. The method which should be employed to secure their co-operation will depend on the circumstances of each case. Tact, courtesy, and patience are all necessary, and these should be backed up by determination based on confidence in the program and comprehensive knowledge of the method of executing it.

It is desirable, therefore, to set up an organization composed of those executives and departments which are directly affected by this system. These

departments must be divided and subdivided into groups with clearly-defined practices, to prevent the overlapping of responsibilities and resultant mismanagement. The duties of everyone involved must be distinctly classed in an effort to eliminate all possible chances of repetition and perhaps, contradiction.

The subdivision and classification of power to most efficiently establish budgetary control is and always will be an arbitrary point. Considering, however, the industry to which it is to be applied, I think that the following division is most applicable:

1. The President of the Company
2. The Budget Committee, composed of the Vice President and Policy Board
3. Planning Department
4. The Accounting Department
5. The Department Heads

Each division will be examined separately to show the powers and duties that are vested in them.

The President of the company is the first in line in the organization of budgetary control. He has the power and authority to accept or refuse any plan which is

submitted to him from the other officials. He weighs the merits of the particular ideas or plans and the possibility of attaining the purpose for which each was intended. No budgetary control program has a chance of success unless it is initiated and actively supported by the president. The attempt of any executive other than the president or his budget director to inquire into the activities of department heads, or prescribe the conditions under which they shall function, is likely to be met with resentment and failure to co-operate. The president is the only authority that can finally and effectively mediate the many conflicting interests of executives whose work must be co-ordinated for successful budgeting. He must, necessarily, hesitate before he places his stamp of approval, because in the final reckoning the success or failure of the plant is cast upon his shoulders. Success evokes the praise of the stockholders; failure arouses their scorn or threats. He, therefore, must view all the offerings with an impartial eye and consider the advantages that would accrue from their use.

In the preparation of governmental budgets it has usually been assumed that final control and responsibility is vested in the chief executive. Consequently, he is usually required to submit the proposed budget to the legislative body with his personal approval and he is held directly accountable for its contents.

The Budget Committee acting under the direct sponsorship of the president will undertake the task of building the budget. This group is composed of the vice president or general manager who serves as the budget director, and the policy board, whose members include the heads of all the departments throughout the plant. This committee has exclusive interest in the policies of management. They mould the separate departmental plans and transpose all the data into what may be called a "Master Budget", made up of the budgets of the Service Departments, the Producing Departments, the Sales Department, and the Administrative Department. This "Master Budget" establishes a complete outline for the business as a whole. They have the power to revise this plan and make any changes

which appear necessary. In other words, they apply the "acid test" before they submit the completed outline to the president for approval.

The Planning Department concerns itself with all specifications in the plant. This department has more data to assist in the establishing of forecasts than all other departments. It has control of stores and makes a study of the standardization of materials. It has important information regarding the capacity and types of machinery and the duties of the workers. It also sets up the drawings and blue prints to be used in the respective departments of the plant. In other words, it has all the information necessary to assist any department head in determining the departmental budget for the period.

The next department in line is the Accounting Department. This department is perhaps the most important one from the standpoint of certitude in the estimates. The Accounting Department has direct access to the records and analytical data of the past performance and present operation of each

department. These recorded statements are essentially needed for the plans under arrangement, in order to keep the foundation for the new control closely allied to the old facts. They make changes, however, which might tend to decrease expense and improve the net profit for the budget period. The figures of the Accounting Department are submitted to the department heads for their consideration and use in the budgets. The place of this department in the setup of budgetary control will be more definitely discussed in Chapter III.

It may be readily said that the final division of the organization is the all-important one. In the installation of budgetary control the primary and yet essential duties are performed by the heads of each department. The obligation of constructing the preliminary budgets upon which the success of the system necessarily rests, is an important fact. Each department head, assisted by his foreman and superintendents, has complete authority over his respective department and is vested with the power to establish representative figures and facts for this department. These facts are

then delivered to those "higher up" for verification and final approval.

There are exceptions to this proposal of having the department heads originate their respective budgets. Whether it is practical to have each department head originate his own estimate is questionable because of his unfamiliarity with the conditions outside his department which affect his budget. It is sometimes thought a better practice and a considerable saving of time to have the budget committee prepare the departmental budgets, and then reversing the usual process, submit it to the department head for his approval.

A skeleton organization chart, Figure 1, is shown on the next page, in order to indicate in a tentative way the relationships among the executives of the company with special reference to responsibility for budget preparation.

One of the first questions which arise in connection with the installation of budgetary control is,- What shall be the length of the budget period? It is necessary to determine the length of the period over

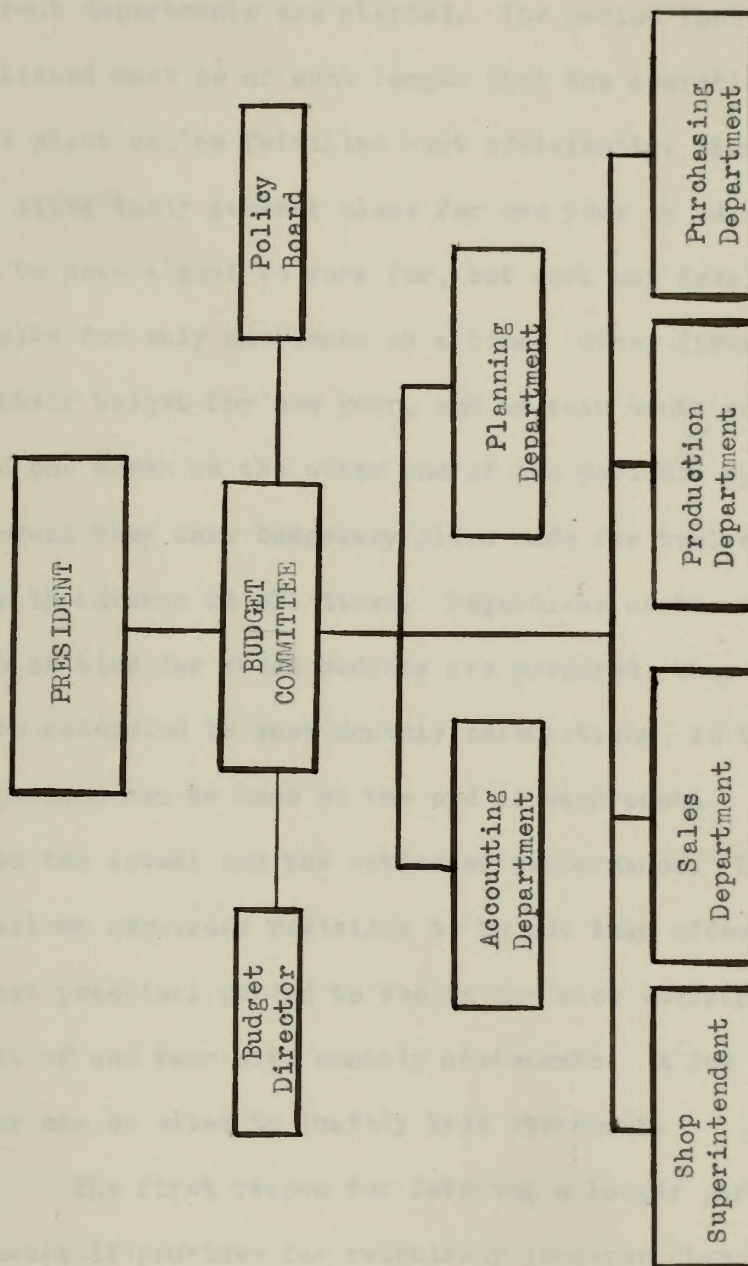
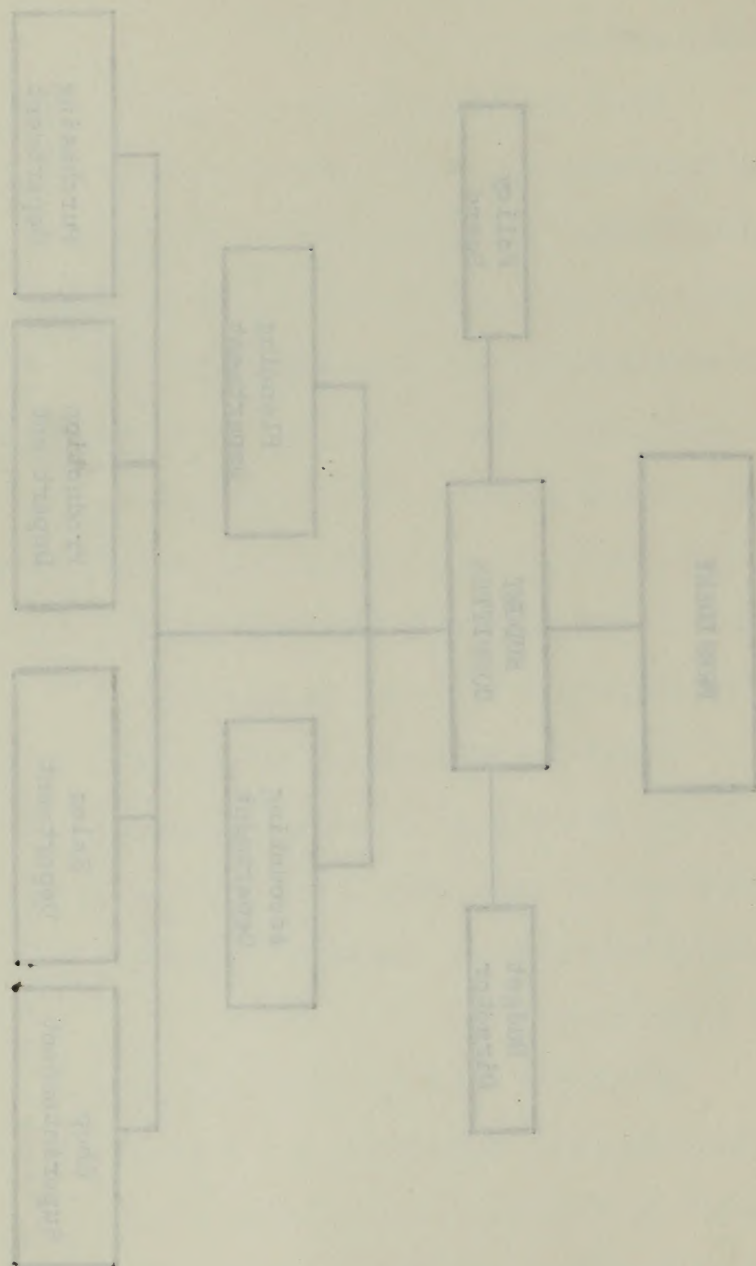


CHART # 1
DIVISIONS OF THE ORGANIZATION IN BUDGETARY CONTROL

ORGANIZATION OF THE BUREAU OF THE ARMY



which this budget will run before the estimates of the different departments are started. The period that is established must be of such length that the operations of the plant can be fulfilled most efficiently. Some firms state their general plans for one year in advance so as to have a goal to work for, but work out detailed schedules for only one month at a time. Other firms make their budget for one year, and as each month goes by add one month at the other end of the period. By this means they have budgetary plans made for twelve months in advance at all times. Regardless of the length of time for which budgets are prepared, they must be scheduled to show monthly calculations, so that a comparison can be made at the end of each month between the actual and the estimated performance. This also allows necessary revisions to be put into effect. The most practical period to use in the shoe industry is that of one year with monthly statements. A few reasons can be cited to justify this statement.

The first reason for favoring a longer period is because it provides for relatively long-run planning. The shoe industry is that type of business that requires

planning far enough into the future in order to accomplish the maximum results.

The second reason is the seasonal factor.

In many industries there are some seasons during which sales orders are received at a faster rate than the manufacturing facilities of the plant will permit the merchandise to be produced. In an instance of this kind, the budget must be based upon the selling season.

Seasonal factors, however, affect but slightly the operations of a shoe plant, since the greatest percentage of the total output consists of staple models. Therefore, the management is able during normal times to spread the production of the plant over the entire year on a fairly-even basis. In consideration of these facts the budget period can readily be established for one fiscal year.

Planning in advance is one of the most common activities of all men in all lines of work, and as budgetary control demands a vast amount of planning, it is necessary to enter into this work before the beginning of the fiscal period.

No methods have ever been developed by which the future operations of a business can be forecast. By careful study, plans can be made in most businesses which will correspond quite accurately with the results attained. Even in those businesses where it is possible to make plans which are only approximately correct, such plans are better than no plans at all. Until a comparatively recent date, sales forecasts were little more than guesses. They were not based on carefully-selected and correlated facts. Unfortunately, there is reason to believe that a large portion of sales estimates are still mere guesses. Market analyses until recently were difficult and costly, because of the time required to collect data from the various sources. Now an abundance of data is available. The United States Department of Commerce in its domestic series of publications has issued several annual reports listing the market research agencies of the country, the purpose being "to provide all persons interested in domestic market investigation with a source book of the research work in their field conducted by both private and public agencies, and by presenting a summary of what others have done, are doing and contemplate doing to curtail duplication of

research".¹

The initial forecast in the budgetary program is usually made by the Sales Department. The reason for this is easily seen. Shoes, as well as any other commodity, are produced in order that they may eventually be sold, and sold at a profit to insure the manufacturer a return on his capital investment. The procuring of sales can be considered the nucleus of the shoe industry, the axis around which our system revolves, and therefore, the fundamental fact upon which our system stands. It is the duty then, of the Sales Department to establish the sales budget, which sets forth the sales which are desired and deemed possible during the next budget period. They must do this since they are more intimately in touch with the actual trends of the business and understand thoroughly the reactions of the market and the consumer.

The first fact to consider in determining the basic figure for the estimated sales of the new budget period is,- past performance. This brings to light the amount of business which the plant has transacted during previous periods. It has already been mentioned that this information was filed and kept faithfully by the Accounting

Department. The figure used is not for the previous year alone, but an average figure for the years during which sufficient business was transacted to allow the figure to be included in the determination. For example, the sales figure for the years 1925-1934 inclusive may be taken and the average sales figure determined. From the consideration of the figures for these years an average may be taken, and in the case at hand, this will be 1,250,000 pairs of shoes. This figure will be the sales estimate based on past performance and the preliminary step in the budgetary plan.

In a manufacturing business it is essential that the sales estimates be made in terms of physical quantities. Production orders are issued for a certain number of pairs of each style of shoe to be produced and not alone in terms of dollars and cents. It is not enough for the production department to know that the estimated sales for the budget period are approximately \$300,000. It must know how many pairs of each style of shoe will probably be sold during the period in order that it may know how many pairs must be produced to meet

the sales requirements.

The result obtained in the previous analysis, that of past performance, must be modified in order to make the estimates more representative; the Planning Departments must observe the business trends or conditions as they exist at the present time. Business trends are of vast importance and must, obviously, be regarded to make the final determination more exacting. Financial history and observation point out that the conditions of 1928, a period of perhaps Utopian happenings, have little in common with the dark days of 1932. Since, however, the plans are being arranged for the year 1935, they must temper the figure for that preceding era of perhaps superficial prosperity and analyze the facts now being presented.

The business world is at present in a state of economic upheaval. The general business decline which had been rapidly spreading since 1930 forced the owners of every business to enforce an economy program. The result was a general epidemic of unemployment, a drastic reduction in salaries and wages and a constant revision of the prices of consumer commodities.

The Federal Government , however, has intervened. Through the medium of the National Recovery Act and the installation of specific codes for every industry, the attempt has been made to check unemployment and force the price trends upward. This is being done by limiting the number of hours which an employee may work and also by establishing a minimum wage for the employee.

The entire problem for forecasting business trends is both a complicated and a delicate matter. Well-known experts on the subject of interpreting trends and the effect of business cycles have not always been right. It would certainly be unwise not to utilize all possible available information to determine the probability of the continuance of the trend plotted for the years 1933-1934-1935 in order to avoid too great a surprise either of a further rapid upward turn or of a decline. Even with all the data that can be procured, the trend cannot be forecast with any too great accuracy as to either the top of a peak or the bottom of a valley. Realizing the importance of these facts the organization must be conservative in their practices lest unsound

The Federal Government, however, has
intervened. Through the medium of the National Recovery
Act and the installation of specific taxes for every
industry, the attempt has been made to check unemployment
and force the price of goods upward. This is being done by
limiting the number of hours which an employer may work
and also by establishing a minimum wage for the workers.
The entire question for forestalling business
growth is both a complicated and a delicate matter.
Self-known experts on the subject of integrating business
and the effect of business cycles have not always been
right. It would certainly be unwise not to utilize all
possible available information to determine the probability
of the continuance of the trend plotted for the years
1923-1924-1925 in order to avoid too great a surprise
either of a further rapid upward turn or of a decline.
Even with all the data that can be presented, the trend
cannot be forecast with any great accuracy as to
either the top or the bottom of a valley.
Realistic the importance of these facts the organization
must be conservative in their practices lest demands

policies and unguarded thoughts place the plant in a dangerous position.

The Sales Department must take warning from the consideration of the definitely-stated statistics and charted facts showing the general business decline and the inability of the public to purchase. General buying has decreased about twenty per cent of its former figure. It will be a natural consequence that shoe sales will likewise decrease. So tempering the business trends with individual judgment, it is deemed advisable to reduce the initial quota by twenty per cent pending further development. The quota based on past performance outlined the estimated sales at 1,250,000 pairs of shoes. This figure is positively unsound for the present trend of business. In consideration of the facts which have been enumerated, the estimated figure will have to be reduced by 250,000 pairs, in order to adjust itself to this decline in business. The revised estimated sales figure then, will be stated at the maximum limit of 1,000,000 pairs of shoes.

Before the sales estimate is submitted by the

Sales Department to the Production Department, it should be studied for further revision because of production capacity. It is useless to formulate a sales program which is beyond the capacity of the Production Department to satisfy. Consequently, data must be obtained from the Planning Department which will show production capacity. It is then possible to determine whether the quantity called for by the Sales estimate can be produced. If not, it may be necessary to determine which items should be reduced or eliminated.

A discussion arising at this time pertaining to the determined sales figure demands a brief explanation. The shoes which are to be manufactured and sold will not all be of the same size, style, or color. A variety of finished goods is necessary in the shoe business, in order to satisfy the set desires of some customers and the passing fancies of others. Staple models, that is, the particular types of shoes which are always in demand, will form the greatest percentage of the total output. The quota of sport models or

ultra-fancy shoes is a figure generally determined by guesswork. The important need of subdividing the sales into particular units or types does not necessarily pertain to the discussion of budget control, but is essential for the determination of the cost of sales. Since the cost elements are not being determined at this point, the sales will be treated as if the shoes were of one standard type.

The reader must keep in mind during this discussion, the distinction between the estimated and actual sales. Everyone understands that actual sales take place after the period of manufacture, or the productive angle has been completed; unless, of course, the plant is manufacturing to specific order. In this system of budgetary control the order is reversed and the estimated sales figure is used as a basis for further planning. This point should be remembered as this survey continues, in order to avoid confusion.

The next important step in the development of the budgets is the inauguration and establishment of a productive plan called production control. It is at this

point that the officials co-ordinate the much-discussed sales estimate of 1,000,000 pairs of shoes, previously established by the Sales Department, with the future activities of production. From this phase on, then, the Production Department begins to participate in the budgetary activities.

The proposed sales estimate is now presented to the plant officials in charge of production. The Production Department now has definite knowledge regarding the number of shoes or units to be produced. They must break up this production figure into its component parts in order to arrive at the necessities required to manufacture this designated number of shoes. These requirements will principally include: stores on hand, raw materials, findings, machinery, and operators. They must establish a system which will control these elements of the productive program. This system might well be termed Production Control.

Production Control, according to George D. Babcock's definition is "that system which controls the order of movement of the elements of a productive program

in relation to each other and to the whole"¹. In other words, production control embraces all the activities under the jurisdiction of management engineering. It covers design and specifications, analysis of the product and of production facilities, practical processes, inventory control, waste, and spoilage eliminations.

The exponents of production control have also called it "preplanning" because of the fact that control is based on foresighted planning.² The term "preplanning" will be used often in referring to this particular division of budgetary control.

The Production Department heads must consider five important steps in order to carry out preplanning. These steps may be classified as follows:

1. The kinds and quantity of material required for production
2. The number of machines and workers necessary to work this material
3. A definite routing
4. Scheduling the work through the plant
5. Dispatching the work to the various operations

¹
L. P. Alford, -"Management's Handbook", Page 599

²
Adapted from "N.A.C.A Publications" BulletinII, May 1, '28

Before considering the first topic, it is necessary to mention a few points connected with material. The retail price of a pair of shoes is composed of the cost of goods sold, which includes the material, labor, overhead, and any other expenses of production and selling. The material used in the construction of the shoes is divided into leather, cloth, and findings. At this time we shall discuss only those points relating to the procuring and selection of these elements by the Production Department. The cost of the materials will be taken up later in the study.

The first point in preplanning calls for analysis of the kinds and quantities of materials to be procured. The selection of raw materials demands an exacting study before actual purchasing takes place. The requirements of the shoe must be known before the different grades of leather can be selected. The inner leather, for example, must be different and usually not of such a high grade as that used on the outer portion of the shoe. The color of the leather must be the same throughout, in order to have the shoe of uniform tone. The leather is often stretched

during the many processes and this has a tendency to emphasize any inaccuracy in the color. The findings, that is, the incidentals such as eyelets, nails, and different weights and grades of thread, must be selected after reviewing their adaptability to the product. These specifications are made known by the Planning Department and are recorded and placed on file for future use.

The production budget indicates the quantity of goods that will be produced for the coming budget period. The quantity of material to be purchased demands exacting accuracy. The Production Department has detailed information as to the quantity of leather, cloth, and findings required to carry out the proposed manufacturing budget of one million pairs of shoes. With this information it is possible to prepare the raw materials budget.

The Receiving Clerk is responsible for incoming materials. It is his duty to receive the materials, determine and report the quantity received, inspect them as to quality, and deliver them to the storeroom to be

placed in stock. In establishments that use materials which must comply with definite technical or specific standards, as in the shoe industry, a separate Inspection Department is usually maintained. For all practical purposes it may be viewed as a subdivision of the Receiving Department.¹

The Stores Recorder has charge of the inventory in stock, which he controls by means of a Stores Ledger. This Ledger is made up of a series of indexed cards. It is preferable to have these cards filed according to some definite plan so that they can be referred to for daily use. The purpose of these cards is to give the balance of all kinds of materials on hand at all times. The quantity of material on hand is limited by maximum and minimum figures. A form of the Stores Ledger Card is indicated in Chart #2.

These figures prevent the stock of materials from becoming too large or too small as the case may be. When the amount of materials is expanding too rapidly and exceeds the maximum figure, the Stores Recorder orders purchases curtailed until the stock is again

¹ Adapted from "Accounting Systems"- W.R. Thompson-P.579

within the quota stated in the records. An excessive inventory of raw materials requires additional storing space, ties up too much working capital at one time, and represents idle funds which may be needed elsewhere. When the supply of materials is falling short, the Stores Recorder places a requisition order with the Purchasing Agent for additional materials and again replenishes the stock. Correct inventory control eliminates the possibility of either of these situations becoming prevalent. It aids the manufacturer to obtain knowledge regarding the cost of materials and promotes efficient handling of stock.

Upon receipt of a purchase requisition the Purchasing Department makes the necessary arrangements for the purchase of the materials required. This includes securing quotations and ascertaining freight rates and deliveries. When the vendor from whom the purchase is to be made is decided upon, a purchase order is drawn up and sent to him.

The Purchasing Agent when requested by the Stores Clerk to procure addition material, must be guided

by at least these two considerations:

1. The time required to obtain delivery
2. Economical quantity to purchase

The first factor is important from a production standpoint. If the stock of materials on hand falls below the minimum figure of the Stores Ledger and is not immediately replenished by the Purchasing Agent, operations cease, expenses accumulate, and there is an unnecessary loss to the manufacturer.

The second factor depends upon the amount of material needed and the terms upon which the particular material can be purchased most profitably. The Purchasing Forecast will aid in systematizing material requirements. This form is shown in Chart #3.

The second division under preplanning pertains to the equipment, that is the machinery and operators necessary to process the material for the productive work. The adaptability and efficacy of machinery in the shoe industry and its complete adoption into the productive departments of plants has been treated. The operators of these machines have

[illegible]

CHART # 3

PURCHASING FORECAST

been considered and they have been found to be a high-minded type of specialists, essential to the carrying out of the intricate details of shoe structure. It is now important to harness, or man the almost unlimited number of machines, and establish a definite number for the purpose of production.

It is important to understand that production must at all times maintain a slight margin over sales. This means that there must always be a larger amount produced between the beginning and end of the fiscal period than there is being sold. This slight productive margin should be maintained in order to insure the purchaser of the shoes an almost immediate delivery. Speedy deliveries have a tendency to achieve a result of return orders, and a small stock of finished goods demands less storing space. Chart #4 will outline the course which the estimated sales and production should take.

It has been stated previously that the length of a budget period will be one fiscal year. It follows then, that the production of one million pairs of shoes

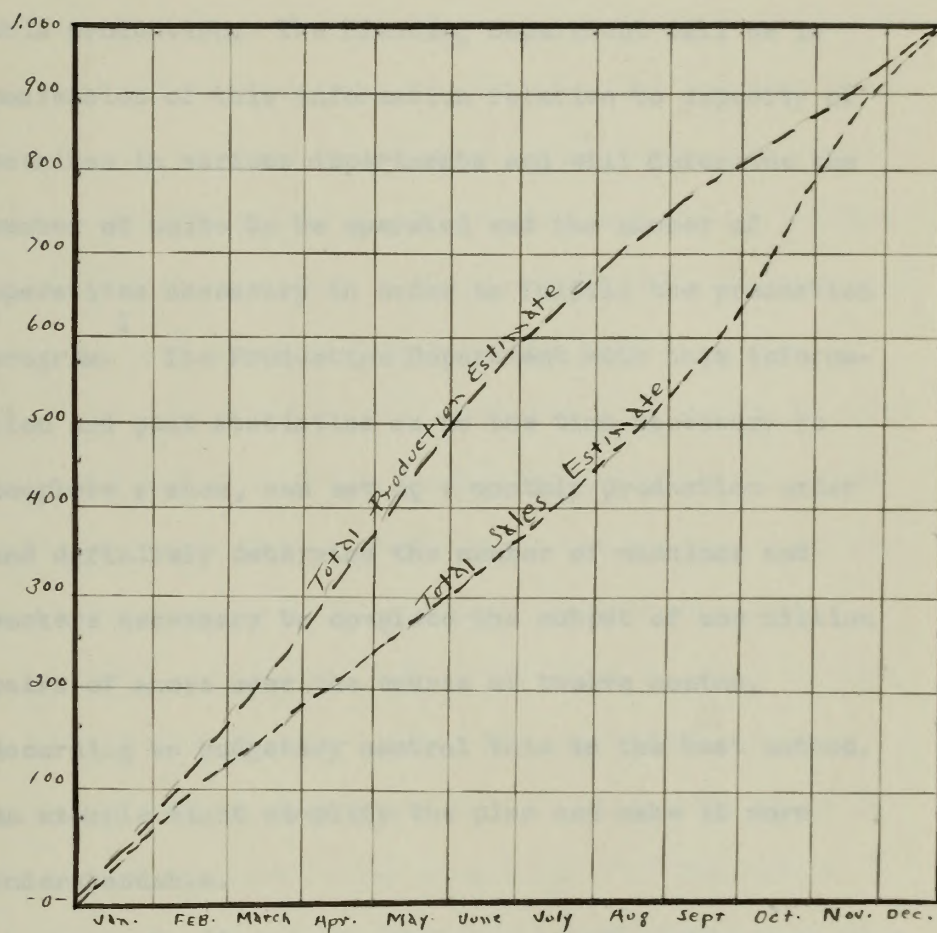


CHART # 4
RELATION OF THE ESTIMATED ACTIVITIES OF THE SALES
AND PRODUCTION DEPARTMENTS

must take place over this stated period in order to fulfill the requirements of estimated sales. It is necessary to know how many machines and workers there are at the disposal of the manufacturer to accomplish this production. The Planning Department will be in possession of this information relative to capacity of machines in various departments and will determine the number of units to be operated and the number of operatives necessary in order to fulfill the production¹ program. The Production Department with this information and past statistics as to the time necessary to complete a shoe, can set up a monthly production order and definitely determine the number of machines and workers necessary to complete the output of one million pairs of shoes over the course of twelve months. According to budgetary control this is the best method. An example might simplify the plan and make it more understandable.

The Production Manager, the Shop Superintendent and the foremen have under their direction a definite number of machines and operators to carry on the workings

¹

Adapted from Financial Handbook, -R.H.Montgomery, - P. 273

of the plant. For the purpose of rounding out the illustration, the potential power of the department will be placed at two thousand machines and twenty-seven operators. Statistics gathered by job analyses and time studies in the past indicate that these agents are capable of producing approximately eighty thousand pairs of shoes a month on full time. The monthly production order will be temporarily placed at eighty thousand units. On this monthly basis the total completed production for the year will be nine hundred sixty thousand pairs of shoes.

According to the estimates, the output is forty thousand pairs under the production requirements. This fact indicates that an adjustment must be made to bring the totals nearer to each other. Production must, of necessity, be "stepped up" or increased in order to take care of the estimated sales. The most efficient and possibly less expensive way to accomplish this would be to spread the total under production over the entire period. In order to do this there would have to be an increase of daily working hours, or overtime, and a greater use of the present machinery. If this plan were

carried out, the operations of the department might be determined on a more even basis and therefore, would not necessitate the radical temporary changes which would disturb the present setup of the department. The department head and his assistants must approximate a higher monthly production figure and fulfill this by inaugurating the overtime plan. This plan would increase the monthly production order and balance the sales and production estimates at the end of the period.

The facts in this example are perhaps ideal, since they can be so readily adjusted and made suitable to the needs of the plant. Greater difficulty would be experienced, however, if the means of production were entirely inadequate to care for the proposed output. If this were the case, either the sales estimate would have to be drastically reduced or a definite expansion would be necessary in the plant. It is often exercising better judgment to revise the proposed plans rather than undergo the extra cost of new equipment. Then again, the fact that extra equipment unnecessarily installed might lie idle in the future is an important objection.

One point in favor of this extra equipment, however, is that the increase in equipment would be undertaken during a period of business depression. This new machinery could be utilized to its greatest extent when the shoe industry begins to increase its activity.

Routing, the third factor under preplanning, takes into consideration the numerous essential features directly pertaining to actual production. This division establishes in advance the best line of travel and order of procedure over which the units will pass. It co-ordinates all the elements of production, such as time, place, materials, machinery and workers. It is also important that work in process should arrive and leave the station at the scheduled time.

There are usually methods of producing or building a shoe, but it is the duty of the head of the Production Department and his assistants, to study the particular types of shoes which are to be constructed and to determine the best possible method of manufacturing them. The results which are obtained from the analysis should be in the most logical and systematic order to

insure the correct connections between each operation.

In the shoe industry the accuracy of the work done on the shoe depends largely upon its being performed in the proper sequence. "In continuous activities this is comparatively easy, since the sequence is almost automatically fixed by the character of the industry."¹

When this rotation is established and found to be adaptable, it should be maintained to stabilize both the cost of production and the element of time.

After the sequence of operation has been determined, it is vitally important that some permanent record be kept of it. There should be a special operation sheet to tabulate these different productive divisions. The foremen in charge at the different points of production also add upon this operation sheet the time necessary to handle the shoe and to complete the particular process that is performed. It is necessary that much consideration be given to this very important setup. The operation sheet is diagrammed on Chart #5.

Routing, then, has established the manufacturing of shoes as a continuous process, developing from the time

OPERATION SHEET						
OPER. NO.	OPERATION	Loca tion	Mach.	Time per Piece	Time per Lot	
1.	Outsole					
2.	Tap					
3.	Midsole					
4.	Insole					
5.	Welt					
6.	Cork Welt					
7.	Center					
8.	Heel					
9.	Top Lift					
21.	Gem Duck					
22.	Extra					
		Day	Mth.	Year		
					Size	
	Style					
	Remarks					

CHART #5

OPERATION SHEET FOR TABULATING THE SEQUENCE

OF MANUFACTURE

the raw materials leave the stock room until they enter into the stock of finished goods. Each operation is a foundation for the subsequent one. This fact will simplify the formulation of the schedules which is the next subdivision of preplanning.

Scheduling is defined as "the determination of the relative time at which each operation or event in connection with manufacturing may occur"¹. In other words it fixes the size and duration of each individual task and the time limits within which each job must be done.

The facts of scheduling are co-ordinated with the monthly production order of eighty-five thousand pairs of shoes, and arranged the time limit of each process of this order. In connection with this the Production Department must carry a record of how the daily production is progressing. This may be done in a systematic way by the use of a schedule tape. This tape is marked with the production data of each day and must relate proportionally to the total output.

The route sheets have been set up showing and

¹

"Management's Handbook", - L.P. Alford, Page 637

tracing the definite course which the shoe will take through the plant. The schedule tapes which point out the desired data regarding the actual production in comparison with the predetermined estimates have been formed. It is now necessary to link these different notions into a workable unit. This is made possible by the dispatching of the work, the fifth division under preplanning.

Dispatching in a business sense means to perform, to execute speedily and to finish according to prearranged plans and schedules. This particular division then, can be said to be the exercising of control or supervision over the already arranged plan. This control must be placed in efficient hands and be definite and strict because no system of control can be better than the men who operate it.

The Dispatch Clerk, a member of the Planning Department, has charge of this supervision. He issues the material requisitions, the time card, the instruction card, and the inspection orders, and likewise checks these cards as they are returned to him. He has

no direct dealings with the workers, however, but can indirectly discipline them through their superiors, the foremen, if they fail to accomplish the given tasks in the standard time set. The foremen can directly bring about the correction of these errors.

In an effort to shoe the operation of dispatching, let us presume that the system of budgetary control has been installed and that production is about to begin. The material requisitions have been issued by the Dispatch Clerk and materials have been set out from the stores by the Stores Clerk and are on hand for the first application. The route sheet is now checked for the beginning of this operation; namely, the placing of the leather upon the last. The foremen follow the instructions of the Dispatch Clerk and supervise the production and the workers in order to make certain that the operations are completed in accordance with the prearranged plans and schedules. They are then passed along to the next process after having been checked on the route sheet. The control is continued directly through the processing of the shoe up to the point

where it is completed and becomes a part of the finished goods inventory.

It should be understood that there is not minute supervision over each individual shoe, and that a special route sheet has been prepared for single pairs. There is one route sheet for the total amount of production that will be accomplished in the plant over the course of one day. The possible number according to our estimates will be approximately seven thousand pairs daily.

Planning and controlling production is further accomplished by the use of graphic charts and graphic methods of control. They make it possible to visualize conditions in the shop and to keep in mind the many facts which must be considered in order to maintain a constant and uniform volume of production. Graphic methods enable the Production Department to keep work planned ahead for each department or machine; to shift work from one machine to another when necessary; to give rush orders precedence over regular work; and to avoid congestion or idleness in different departments.

The third main section to budgetary control is

the preparation of the expense budgets. Expenses are a natural result of operations and it is well to have some method of comparison between the actual and estimated expenditures. This may be done by predetermined estimates.

The future activities of the Sales Department and the Production Department have been analyzed and are the basis for determining the estimated expenses. The selling expense budget based on the sales, and the operating expense estimates based on production can now be established.

The selling expense budget may be divided into two sections, advertising expense and actual selling expense. The advertising expense is almost always considered a part of the selling expense, but it is well to classify them in order to determine their respective budgets.

The advertising expense is the amount of money that will be spent in developing the market for the shoes of the particular manufacturer. In preparing the advertising budget the first question is usually the total amount to be allowed. Advertising men agree that this

depends on many factors and can be decided only after a careful analysis of each company's problems. A question as to what method should be used in determining the amount of the appropriation has been discussed in an article based on a survey of one hundred leading industrial advertisers. The writer lists eight methods, seven of which might be used by shoe manufacturers.

1. Percentage of sales or profit's method. This is said to be the most widely used method. Whether to use past sales, future sales, or a combination of both is a debatable question.
2. The task method. This consists of defining the task to be accomplished and then budgeting an amount that will be sufficient to do this.
3. Per unit method. This consists of levying a definite amount on each unit or pair of shoes sold.
4. The business conditions method. This method is varied as business conditions warrant.
5. The "watching competitors" method. This is self-explanatory.
6. The number of prospective purchasers method.
7. The goodwill method.

We will use the first method listed,- the percentage of the sales method. For example, the appropriation may be $2\frac{1}{2}\%$ of the anticipated sales. In the shoe industry the percentage set aside from year to year is fairly consistent. It is hardly ever necessary to exceed the figures of past years in order to "push" a new line. The consumers will not buy a particular shoe because it is advertised, but if it appeals to them and they need a pair of shoes, they will purchase them. This advertising estimate then, can be figured to apply for a number of years.

The selling expense is divided into two classes:

1. The expense of securing orders
2. The expense of filling orders

The first division will include the expense of selling the shoes, that is the expenses of the salesmen and the sales office expense. The estimates for these expenses will depend on the efficiency of the Sales Department itself, and can only be approximately calculated. These figures are subject to constant revision.

The number of salesmen depends on the salability of the shoes and the extent of the territory covered. Their salaries and commissions will probably be based on their sales quotas. The sales office expense depends on the number of branch sales offices and the employees necessary to handle the orders of the customers. The selling expense budget, then, can be said to rely more on past figures and the efficiency of the Sales Department rather than on any new ideas offered by budgetary control.

The expense estimate, the cost of supplying the demands of the customers, is based on the efficiency of the Production Department to supply the orders of the Sales Department. If production control is exercised properly, there will be a minimum of storage costs and almost immediate delivery.

The expense of handling, delivery and insurance is subject to little change and can be determined fairly accurately by knowledge of freight costs, insurance rates, the extent of the territory covered, and the possible sales in each territory.

It is difficult to prescribe any definite method for budgeting operating expense. The data obtained from past periods is useful and may be adjusted to suit the present setup of the plant. The fixed expenses such as rent, taxes, and depreciation are constant as long as the present plant setup continues. There are variable expenses, such as power, light, and maintenance, which depend on the amount of the output.

To complete the operating budget it is necessary to select for each phase of activity the expense level which indicates what the standard expenses will be for the period. On the basis of the previous assumptions the knowledge exists as to the amount of sales and production activities to be performed. The operating expenses will be guided by these figures so that the task is merely one of compiling the expense budgets on the proper forms.

As the individual budgets were approved by the Budget Committee, they formed the basis for an estimated income statement and balance sheet. The approval of the entire budget system formed an

exhibit setting forth the income from the manufacture and sale of one million pairs of shoes.

The budget system is not complete unless it includes an estimated income statement showing the income and expenses of the business as they will be for the budgeted period if the budgets are carried out according to schedule, and a balance sheet as of the last day of the budget period, indicating the condition of the business as it will be on that date.

In summarizing this chapter, we recall that an organization has been established to govern the operation of budgetary control. We have established an estimated sales figure for one year, upon which the activities of the Production Department have been reorganized and made suitable to produce the estimated number of shoes. The expenses of selling the shoes and delivering them to the customers have been calculated, based upon the efficiency of the now-controlled Sales and Production Departments. These estimates have been moulded into a master budget and the result is the "Pro Forma" profit for the period. The preparation of these statements will be shown in the next chapter.

CHAPTER III

ACCOUNTING AS AN ADMINISTRATIVE AID

In every business, no matter how small or simple it may be, some type of accounting is necessary to figure the financial status of the concern after operations. In a trading business where merchandise is bought and sold at a mark-up, the difficulties are relatively few. In a manufacturing business, however, materials are bought and processed by the company and then sold at a price which includes the cost of manufacturing plus the company's profit. Under these circumstances every item must be taken into consideration in an effort to accurately determine the cost of sales. It is with these ideas in mind that we enter into the discussion of accounting in the shoe industry.

The real function of all accounting work is to render a service to business management. The service lies in placing before business executives the most complete information of their affairs, analyzed and interpreted so as to be readily understood and used

effectively in guiding and controlling their operations, and that transactions may be carried on more profitably, economically and conservatively. As business organizations grow larger and operations become more diversified the executives must necessarily place greater reliance upon accounting services.

The Accounting Department in the shoe industry and usually in every manufacturing concern is separated into two divisions, Cost Accounting and Financial or General Accounting. Cost accounting is the analytical study of the expenses incurred in carrying on a business. The Cost Department assists the Production Department Manager and the Planning Department with the analytical study of the expenses and costs involved in producing the shoes, using as a basis the predetermined figures. The average cost of each pair of shoes is finally evolved. The Financial Accounting Department deals with the business as a whole. Its major function is the recording, verification, and presentation of the actual transactions which have taken place over a designated period. For budgetary control purposes, however,

this department will outline in statement form, all the estimated incomes and expenses which have been previously outlined by other departments for the budgeted period and determine an estimated profit from these budgeted figures. These two departments will be viewed separately. Details will be given to show how they enter into the management of the business.

The basis for the construction or development of any accounting system, whether it is a going concern or one being newly organized, is the chart of accounts. This chart designates by proper titles the accounts required for executive control. A well-constructed system of accounting demands that a classification of accounts be established providing for the grouping of information in accordance with the data required for the preparation of reports. A correctly-designed chart of accounts adjusted to the needs of a particular business will enable the Accounting Department to assemble the facts pertaining to the business, not only with facility, but at the same time in a manner that will reflect the transactions

in their true light.

A chart of accounts which meets the requirements of budgetary control must take into consideration a number of factors. It should be detailed enough to provide for all accounts needed at the present time and in the future. It must provide for the segregation of expenses essential for the development of standards. Variation accounts will be used for the variation from these standards. The arrangement of the chart of accounts should permit the segregation of entries in accordance with budget classifications and the assembly of these entries into control accounts as required for the master budget.

After the chart of accounts has met all these requirements, consideration must be given to the mechanical task of compiling accounting records and the assembling of data in a manner readily understandable and involving the minimum amount of clerical expense.

The final consideration is the arrangement and designing of financial reports which must be

prepared for executive use. This provides for a summarization on a final balance sheet and profit and loss statement. ¹

We will assume that the definite accounts to be used have already been established and their place determined on the reports to be rendered. We will show how the data recorded in the numerous accounts is collected by the Cost Department and Accounting Department and finally appears on the executive reports.

It is important in this age of "cut-throat" competition that the manufacturer has an accurate estimate of the cost of manufacturing each unit. With this definite basis to figure on, he can offer intelligent business bids and thereby protect himself against losses.

A properly-constructed cost system is a vital machine of management. It achieves a number of purposes, and the benefits derived therefrom outweigh any arguments which may be brought against the installation of such a system. There are four important arguments in favor of using a cost system in the organization of a

¹ Adapted from Lectures by Prof. Bornhafft - B. U. 1933

of a plant. They are as follows:

1. The determination of the lowest price at which competition can be met
2. The only means of actually constructing a shoe at a price
3. The ability to determine the unprofitable lines-1
4. The only means of obtaining actual costs to compare with the estimated costs

By a discussion of the four facts outlined above, the efficacy of such a plan can be shown and a definite tie-up with the system of budgetary control can be established.

The first division is the important one from the manufacturer's point of view. It is a well-known fact that a price on an article cannot be quoted if the costs of this article are not known. Under this heading, the method of predetermining the unit cost of the shoes will be surveyed. In this way the completion of the estimates can be carried through.

The manufacturing cost of a pair of shoes is composed of three distinct elements:

1. Material
2. Labor
3. Expense

Material is necessary for the production of any article. Manufacturing consists of changing the form or nature of the material in such a manner that it becomes better fitted for human needs. Thus, a strip of leather may be worked into various shapes, and by the final change in form is more valuable than in its original state.

Labor is necessary for the adaptation of material to greater usefulness. Without labor manufacturing is impossible, for no matter how great may be the use of modernized machinery, there is always some point at which human labor is necessary in order to give effect to manufacturing processes.

Without expense labor cannot work upon material. Equipment, power and other facilities must be provided in order that labor may perform its tasks. Each of these requires expenditures in the form of expense.

The first item entering into the cost is the

the raw materials or leather, cloth, and findings.

Up to this point only the estimated cost has been determined. The actual cost is now taken from the bill of material on the material requisition as priced by the Storekeeper. One form of material requisition suitable for our purposes is shown in Chart #6.

The Cost Department received these figures and with its previous knowledge acquired from the Planning Department regarding the amount of leather which must be used on the shoe, they are able to definitely establish the cost of raw materials for each style.

It is important to observe the variations in material costs. There are two principal ways in which these costs may vary.

1. Price of material
2. Material used

In order to standardize the cost of materials the Cost Department must carry a "Variation in Materials Purchased Account". This account is not necessary when

estimating for budget purposes, because the Purchasing Department determines the price of materials by referring to past and present prices and studying the price trends and market conditions. When determining actual costs, however, the "Variations Account" must be used. This account is charged if the price goes up and credited if the price comes down. Should these price changes eventuate, the elasticity of this account will make allowances for the difference.

The variation in the quantity of material used demands investigation. The Manufacturing Department may use more or less material in producing the shoes than was estimated. The Producing Departments should be investigated to determine why more leather or findings are used and thereby possibly eliminate waste in these materials. If less leather is used, the maximum of efficiency is being achieved, allowing more profitable operations.

The second major fact entering into the subject of cost is labor. This item constitutes the largest element of expense in the cost of a shoe, as

it does in perhaps every industry. Labor is divided into two classes, day labor and piece work. The day labor is totaled by time-card compilation, whereas the piece work is paid for according to the rate set by previous standards for each operation.

In the shoe industry, the labor is practically all done by union workers. The manufacturer, therefore, has very little choice in the wage paid the employee. A union worker demands union wages. The price must be met or production stops. The National Industrial Recovery Act stipulates the minimum wage that can be paid an employee and the maximum hours to be worked, thereby placing a restriction on the manufacturer. The only way, then for the manufacturer to lessen his labor costs is to promote the efficiency offered by production control. By establishing the maximum of efficiency, the Production Department would be able to produce a greater volume in the same time and thereby reduce the costs of manufacturing the shoes.

To determine accurately the unit cost of the shoe, reliable records of the direct labor must be kept.

These enter into the data of the Cost Department and can be obtained by keeping records of the time cards and total production on specially-prepared forms which allow for a summarization of these charges.

The third factor is manufacturing expense. This is often called burden or overhead. Manufacturing expense includes all the expenses and costs, direct labor and direct material excepted, incurred in the operation of the plant. They consist of three elements:

1. Indirect Materials
2. Indirect Labor
3. Indirect Expense.

Indirect materials include all material not used directly in the manufacturing of the shoe, such as oil for machinery, needles, or sandpaper.

Indirect Labor consists of all labor not directly expended on the product, such as wages of receiving clerks, truckers, and unskilled apprentices.

Indirect Expense includes all costs for the general use in the plant, such as light, water, repairs, etc.

These expenses and costs will be gathered by

the Cost Department and distributed over each producing department. The distribution of this overhead may be done in a number of ways. The most applicable methods are:

1. Direct labor hour method
2. Floor space
3. Production centers

The direct labor hour method of distribution uses time rather than cost. The total manufacturing expense is divided by the hours worked and the result is the amount of burden to be charged against the cost of the shoe. If the burden is distributed according to the floor space method, it is spread over the department according to the amount of square feet of space that particular department occupies. The distribution of overhead may also be accomplished by means of production centers.¹ The similar operations through the plant are called production centers, and the burden is distributed over each machine in the center. This is known as "Distributing expense over the point of the tool". The distribution of overhead, then is an arbitrary point which may be selected as

¹

the Cost Department desires.

The Production Department may aid the Cost Department in determining the cost of the shoe by means of manufacturing sample lots of each style, which will be called "Test Runs". These "Test Runs" serve a dual purpose. They are a check on the manufacturing processes and often aid in detecting hidden weaknesses in manufacturing which hinder the efficiency of the department. In the regular run of manufacture these defects might pass unnoticed. The "Test Runs" also give the Cost Department accurate data regarding the cost of the shoe.

All the expenses entering into the cost of the shoe have been collected by the Cost Department over the course of the "Test Runs". These expenses are entered on a cost sheet which contains the expenses incurred in all the processes throughout the manufacture of the shoe. When this sheet is totaled the actual cost of producing the shoe is determined. Chart #7 outlines the cost sheet.

Selling prices on popular-priced shoes are

not usually based on costs but on already-established price levels. The old-time method of setting the price on the cost-plus basis is done today only on expensively-constructed shoes. This system does not require such an accurate knowledge of the costs of manufacture. Today, however, standard-priced shoes are common everywhere. This fact determines the price which the manufacturer can ask even before the production begins.

With a properly-conducted cost system the manufacturer has a method whereby he can produce the shoes within the already-quoted sales price. If the estimated costs are running too high, they must be adjusted and brought down to the actual costs. If they have been figured below the actual costs the variation must be added to the estimate so that it will compare with the actual cost. If the costs are fairly representative for the type of shoe and offer a good margin of profit, then the operations of control are deemed successful.

Predetermination of costs also points out the unprofitable lines being produced. The Regal Shoe

1

Adapted from "Modern Methods of Executive Control",-
Wingate Kelley,-Page 96

Company usually sells their shoes at the standard price of \$6.60. This means that in order to make a profit, they must manufacture well below this price. A particular model, a riding boot, was costed at \$8.00. This boot, nevertheless, was sold at the standard price. This is pointed out to impress upon the reader the fact that without a cost system any shoe manufacturer might subject himself to great losses without his knowledge.

If cost data is to be used to the greatest extent and given correct importance in an organization, it is necessary that those whom they concern should be impressed with a proper sense of their value. Many executives tolerate cost figures; many are enthusiastic about their compilation; few appreciate fully the many ways in which cost data can be used to guide the policies of a business. The cost accountant who can bring to an organization a full sense of the usefulness of costs is an important factor in its success.

Furthermore, the cost accountant must be able to a certain extent to forecast coming conditions. He

must be able to determine from a study of past performances what may reasonably be expected in the future. He must be familiar with the tendencies of the business in its different elements and be able to point out the factors which should be considered in deciding upon policies for future guidance.

Upon completion of its investigation, the Cost Department offers its data on each style of shoe to the Financial Department, so that it can proceed with its duties. This department must find an actual profit for the period.

The Financial Accounting Department, as has been said before, records only the actual financial transactions and value fluctuations of the business as they occur from day to day. At the close of the business period the elimination and grouping of certain of these accounts by bookkeeping entries allows for a summarization of the records in statement form. These statements are prepared for executive use. The Balance Sheet and Profit and Loss Statement show the condition of the business and the net profit or

or net loss for the business period.

For the purposes of Budgetary Control, however, this department will aid the Sales and Productive Departments and all other sections of the business, by combining the forecasted figures prepared in these departments in the form of a budgeted Balance Sheet and Profit and Loss Statement.

Complete budgetary control does not exist unless the Balance Sheet and Profit and Loss Statement are budgeted to reflect the results of the forecasted activity of the period. Failure to budget these statements means that the Budget Committee has stopped short of its final goal. The opinion frequently expressed in regard to these budgeted statements is "that it is merely a refinement which probably requires¹ more work than the results justify". This point of view overlooks the fundamental reason for installing a budget system. They provide a means of proving the accuracy of the other budgets. They allow for a comparison of the budgeted figures with the actual figures of the period. They are concise reports for executive use.

In order to prepare the statements containing the actual activities of the business, the Accounting Department operates a main set of books or general accounts. These accounts include all the real accounts which are divided into assets, liabilities, and capital, and all the nominal accounts which are divided into the income and expense factors of the business. Through the use of these accounts, such as Purchases of Equipment, Material, Sales, Collections and Disbursements, the outside transactions of the business are recorded and finally have a direct bearing on the preparation of these statements. These general accounts also exercise control over the cost or factory records. These records have detailed information essentially important in obtaining the summaries of the main set of books.

There are two ways in which the figures of the factory may be summarized in the general accounts. The particular method used would have been previously determined when establishing the Chart of Accounts.

They are:

1. Controlling Accounts
2. Factory Account

A controlling account is an account in the General Ledger which shows in summary, information that appears in detail elsewhere usually, in another ledger. In our case this will be the Cost Ledger. By using the controlling accounts the detailed data of the cost records will be summarized and the totals entered in the main set of books under the control account titles:

- Material
- Labor
- Expense
- Work in Process
- Finished Goods

In order to reduce the number of controlling accounts in the General Ledger a Factory Ledger is sometimes used. When a Factory Ledger is used it is controlled by a Factory Ledger Controlling Account in the General Ledger which shows in total the amounts shown in detail in the Factory Ledger. This method results in a series of controlling accounts within controlling accounts, as each of the cost accounts in the Factory Ledger controls other subsidiary records.

At the end of the accounting period the main books of the company are closed, leaving balances in certain accounts which form the basis for the summarizing statements, the Balance Sheet and the Profit and Loss Statement.

The Balance Sheet is a statement of the condition of the business at a close of a definite period of business. This statement contains the assets of the company and the liabilities and capital. The result is the change that has taken place since the close of the previous accounting period.

The Profit and Loss Statement is a more minute picture presenting how this change came about. The amount of net sales is given and from this figure is deducted the cost of constructing the shoes, together with any other expenses which have been contracted during the period. Any other income is added and the result is the actual net profit or net loss for the period.

Many of the budget forms have been designed to show actual performance against the forecasted

budgets. The Balance Sheet and Profit and Loss Statement of the company will ^{also} afford an opportunity for a comparison between the goal established at the beginning of the period and the result attained. No attempt will be made to discuss the form of Balance Sheet and Profit and Loss Statement with actual and budgeted figures. These figures will be purely fictitious, but will show clearly the information that is desired and also afford an opportunity for certain comparisons.

The Profit and Loss Statements and the Balance Sheets are presented to the directors and chief executives at definite periods during the year. These periods usually occur annually or semi-annually, but it is apparent that if the management is to make the most of its opportunities the statements must be presented more frequently. Monthly statements of condition are desired, because they avail the management of fresh information upon which to base policies and facts, and enable them to determine in what respects the actual operations of

the plant are failing to achieve the perfection of the estimates.

The work of the Accounting Department ties up with the management of the plant in that the results which they offer can be made the basis of further management. The findings of this Department will aid in carrying on to further perfection the system of budgetary control.

X. Y. Z. S H O E C O M P A N Y

B A L A N C E S H E E TAs at DECEMBER 31, 1934ASSETSCURRENT ASSETS

Cash		\$ 58 900	
Accounts Receivable	\$320 000		
Less: Reserve for Doubtful Accounts	<u>6 000</u>	314 000	
Notes Receivable		9 000	
Inventories:			
Finished Goods	124 000		
Work in Process	80 000		
Raw Materials	16 000		
Factory Supplies	<u>30 000</u>	250 000	
Total Current Assets			\$631 900

Fixed Assets

Land and Buildings		80 000	
Machinery and Equipment	200 000		
Less: Reserve for Depreciation	<u>40 000</u>	160 000	
Tools and Dies		24 000	
Lasts and Patterns	55 000		
Less: Reserve for Depreciation	<u>5 000</u>	50 000	
Total Fixed Assets			314 000

Deffered Charges

Prepaid Advertising		8 000	<u>8 000</u>
Total Assets			<u>\$953 900</u>

LIABILITIESCurrent Liabilities

Accounts Payable		268 500	
Accrued Payroll		<u>18 000</u>	
Total Current Liabilities			\$286 500

Fixed Liabilities

Bonds Payable 7% due 1940		<u>200 000</u>	<u>200 000</u>
Total Liabilities			\$468 500

CAPITALCapital Stock

Common Stock	\$250 000		
Preferred 7% Stock	<u>100 000</u>	350 000	
Surplus		<u>135 400</u>	<u>485 400</u>

Total Liabilities and Capital\$953 000

X. Y. Z. S H O E C O M P A N Y

"Pro Forma" Balance Sheet(Based on Estimated Figures)For The Year - 1934ASSETSCurrent Assets

Cash		\$ 65 000
Accounts Receivable	\$ 332 000	
Less: Reserve for Doubtful Accounts	5 000	327 000
Notes Receivable		10 000
Inventories:		
Finished Goods	117 000	
Work in Process	75 000	
Raw Materials	18 000	
Factory Supplies	23 000	233 000

Total Current Assets		\$ 635 000
----------------------	--	------------

Fixed Assets

Land and Buildings		80 000
Machinery and Equipment	200 000	
Less: Reserve for Depreciation	40 000	160 000
Tools and Dies		21 000
Lasts and Patterns	50 000	
Less: Reserve for Depreciation	4 500	45 500

Total Fixed Assets		306 500
--------------------	--	---------

Deferred Charges

Prepaid Advertising	7 000	7 000
---------------------	-------	-------

Total Assets		\$ 948 500
--------------	--	------------

LIABILITIESCurrent Liabilities

Accounts Payable	\$ 230 000	
Accrued Pay Roll	14 000	

Total Current Liabilities		\$ 244 000
---------------------------	--	------------

Fixed Liabilities

Bonds Payable 7% due 1940	\$ 200 000	200 000
---------------------------	------------	---------

Total Liabilities		\$ 444 000
-------------------	--	------------

CAPITALCapital Stock

Common Stock	\$ 250 000	
Preferred 7% Stock	100 000	350 000
Surplus		154 500

Total Liabilities and Capital		\$ 948 500
-------------------------------	--	------------

X. Y. Z. S H O E C O M P A N Y

PROFIT AND LOSS STATEMENT

Year Ending -- December 31, 1934

Gross Sales	\$2 611 500	
Less: Sales Returns and Allowances	<u>68 000</u>	
Net Sales		\$2 543 500
Less: Cost of Goods Sold		<u>1 875 000</u>
<u>Gross Profit</u>		668 500
Deduct: Operating Expenses		
Factory Expense	112 000	
General Administrative Expense	327 500	
Selling Expense	<u>105 600</u>	
Total Operating Expense		<u>545 100</u>
Net Operating Income		123 400
Add: Other Income		
Purchase Discount	25 400	
Interest on Notes Receivable	<u>600</u>	<u>26 000</u>
Total Income from Operations		149 400
Deduct: Other Expense		
Interest on Bonds	<u>14 000</u>	<u>14 000</u>
<u>Net Profit for Period</u>		<u>\$ 135 400</u>

X. Y. Z. S H O E C O M P A N Y

"Pro Forma" Profit and Loss Statement(Based on Estimated Figures)For the Year - 1934

Gross Sales	\$2 634 000	
Less: Sales Returns and Allowances	<u>50 000</u>	
Net Sales		\$2 584 000
Less: Cost of Goods Sold		<u>1 859 500</u>
<u>Gross Profit</u>		725 500
Deduct: Operating Expenses		
Factory Expense	117 500	
General Administrative Expense	321 900	
Selling Expense	<u>95 100</u>	
Total Operating Expense		534 500
Net Operating Income		191 000
Add: Other Income		
Purchase Discount	22 000	
Interest on Notes Receivable	<u>500</u>	<u>22 500</u>
Total Income from Operations		168 500
Deduct: Other Expense		
Interest on Bonds	<u>14 000</u>	<u>14 000</u>
<u>Net Profit for Period</u>		<u>\$ 154 500</u>

CONCLUSION

There is no exact formula for perfecting an organization. Every business man would like to have such a formula to meet his needs. Budgetary control is not introduced with the idea that it is a hard and fast rule for success. The plan is not considered perfect or final. It is merely a constructive contribution to a large and vital problem.

The development of budgetary control in this thesis is based upon the primary premise that its fundamental purpose is to foresee probable future results and to control the plant accordingly in order to attain the budgeted goal. Many will, undoubtedly, be of the opinion that such a method of operation is impossible, because the average plant is supposed to be running on as close a basis as possible and that further control would in some way injure the plant.

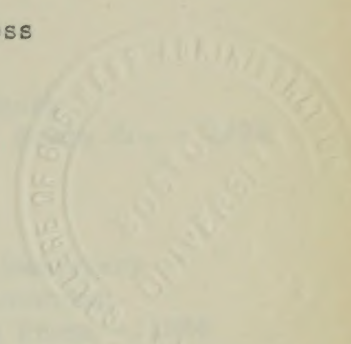
Budgetary control is adopted to stabilize the organization. It accomplishes its purpose. It promotes and facilitates constructive leadership. It welds the

organization into an effective harmonious unit. It establishes co-ordinated effort and allows supervision over the product and the plant. Budgetary control will never take the place of management. It is merely an instrument which helps to effect a guidance not otherwise possible.

Budgetary control has been developed to the greatest extent in the field of production. In my estimation the system still offers new possibilities in other fields relative to industry. The manufacturer can always appreciate added efficiency in his organization and the extension of the system to new fields will offer many benefits.

I should suggest as I bring this discussion to a close, the control of distribution and advertising. Distribution has always been a source of great expense and little has been done to place a check over it. Some attempt has been made, however, and manufacturers realize the savings which are possible under a definite plan of control. Advertising has run rampant and needs control in order to obtain the greatest results

from each dollar spent. "Big Business" has developed gradually and time will place every item in business under budgetary control.



BIBLIOGRAPHY

- | | |
|-----------------------|--|
| Alford, L. P., Editor | Management's Handbook
New York: Ronald Press Co. - 1924 |
| <hr/> | |
| Fordham-Tingley | Organization and Budgetary
Control in Manufacturing
New York: Ronald Press - 1924 |
| <hr/> | |
| Harding, J. S. | History of the Shoe
London: Sir Isaac Putnam Ltd. - 1927 |
| <hr/> | |
| Kelley, Wingate | Modern Methods of Executive
Control
New York: Shoe Trades Publishing
Corporation - 1930 |
| <hr/> | |
| Kimball, Dexter | Plant Management
New York: Alexander Hamilton
Institute - 1929 |
| <hr/> | |
| Lawrence, W. B. | Cost Accounting
New York: Prentice-Hall Inc. - 1931 |
| <hr/> | |
| Marshall, L. C. | Business Administration
Chicago: University of Chicago
Press - 1923 |
| <hr/> | |
| Mazur, Paul M. | New York Times
New York |
| <hr/> | |
| McKinsey, J. O. | Budgetary Control
New York: Ronald Press Co. - 1930 |
| <hr/> | |

Montgomery, R. H.

Editor: Financial Handbook
New York: Ronald Press - 1927

National Association of Cost Accountants Bulletins

Volume XII #2 May 1, 1928
Volume XIII #1 January 1, 1929

Printer's Ink

June 1926

Regal Shoe Company Pamphlets

1933
Boston, Mass.

Sanders, T. H.

Industrial Accounting
New York: McGraw-Hill Book Co., Inc. - 1929

Sutcliffe, William

Statistics for the Business Men
Boston: Harpers and Brothers - 1930

Thompson, W. R.

Accounting Systems
Chicago: LaSalle Extension University - 1931

*657

R43

cop. 1

BOSTON UNIVERSITY



1 1719 02555 7069

